

SEQUENCE LISTING

<110> UNIVERSITY OF GEORGIA RESEARCH FOUNDATION, INC.
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Menon, Nanda

<120> RUBREDOXIN FUSION PROTEINS, PROTEIN EXPRESSION SYSTEM
AND METHODS

<130> 235.00040201

<140> Unassigned

<141> 1999-12-29

<150> 60/114,034

<151> 1998-12-29

<160> 14

<170> PatentIn Ver. 2.0

<210> 1

<211> 276

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: portion of
pRUBEX

<400> 1

catatgaaaa	agtagctatg	caccgtctgc	ggttacgaat	acgaccctgc	tgaaggcgac	60
cccgacaacg	gcgtgaagcc	cggcacctcg	ttcgacgacc	tgccggccga	ctgggtatgc	120
cccgtgtgcg	gcgcccccaa	gagcgaattc	gaagccgcca	tgcatggcgg	atccgaattc	180
gagaaccatc	atcatcatca	tcacaacgac	tacaaggacg	acgatgacaa	ggatctgcag	240
agatcttcgg	gtaccgcgaa	gcttgcggcc	gcactc			276

<210> 2

<211> 76

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: modified
rubredoxin including affinity tag, flag peptide
and enterokinase site

<400> 2

Met	Lys	Lys	Tyr	Val	Cys	Thr	Val	Cys	Gly	Tyr	Glu	Tyr	Asp	Pro	Ala
1					5				10					15	

Glu Gly Asp Pro Asp Asn Gly Val Lys Pro Gly Thr Ser Phe Asp Asp
 20 25 30
 Leu Pro Ala Asp Trp Val Cys Pro Val Cys Gly Ala Pro Lys Ser Glu
 35 40 45
 Phe Glu Ala Ala Met His Gly Gly Ser Glu Phe Glu Asn His His His
 50 55 60
 His His His Asn Asp Tyr Lys Asp Asp Asp Asp Lys
 65 70 75

<210> 3
 <211> 52
 <212> PRT
 <213> Desulfovibrio vulgaris

<400> 3
 Met Lys Lys Tyr Val Cys Thr Val Cys Gly Tyr Glu Tyr Asp Pro Ala
 1 5 10 15
 Glu Gly Asp Pro Asp Asn Gly Val Lys Pro Gly Thr Ser Phe Asp Asp
 20 25 30
 Leu Pro Ala Asp Trp Val Cys Pro Val Cys Gly Ala Pro Lys Ser Glu
 35 40 45
 Phe Glu Ala Ala
 50

<210> 4
 <211> 6
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: affinity tag

<400> 4
 His His His His His His
 1 5

<210> 5
 <211> 8
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Flag peptide

<400> 5
 Asp Tyr Lys Asp Asp Asp Asp Lys
 1 5

<210> 6
 <211> 5
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: enterokinase site

<400> 6

Asp Asp Asp Asp Lys
1 5

<210> 7

<211> 4

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: affinity tag

<400> 7

His Gly Leu His
1

<210> 8

<211> 381

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: A β ₁₋₄₂ rubredoxin fusion construct

<400> 8

atgaaaaagt acgtatgcac cgtctgcggt tacgaatacg accctgctga aggcgacccc 60
gacaacggcg tgaagcccg cacctcggtc gacgacctgc cggccgactt gggtatgccc 120
cgtgtgcggc gcccccaaga gcgaattcga agccgccatg catggcggat ccgaattcga 180
gaaccatcat catcatcatc acaacgacta caaggacgac gatgacgacg atgacaagga 240
tctgatcgaa ggtcgtgatg cagaattccg acatgactca ggatatgaag ttcacatca 300
aaaattggtg ttctttgcag aagatgtggg ttcaaacaaa ggtgcaatca ttggactcat 360
ggtgggcggg gttgtcatag c 381

<210> 9

<211> 124

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: A β ₁₋₄₂ rubredoxin fusion protein

<400> 9

Met Lys Lys Tyr Val Cys Thr Val Cys Gly Tyr Glu Tyr Asp Pro Ala
1 5 10 15
Glu Gly Asp Pro Asp Asn Gly Val Lys Pro Gly Thr Ser Phe Asp Asp
20 25 30

Leu Pro Ala Asp Trp Val Cys Pro Val Cys Gly Ala Pro Lys Ser Glu
 35 40 45
 Phe Glu Ala Ala Met His Gly Gly Ser Glu Phe Glu Asn His His His
 50 55 60
 His His His Asn Asp Tyr Lys Asp Asp Asp Lys Asp Leu Ile Glu
 65 70 75 80
 Gly Arg Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His
 85 90 95
 Gln Lys Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys Gly Ala
 100 105 110
 Ile Ile Gly Leu Met Val Gly Gly Val Val Ile Ala
 115 120

<210> 10
 <211> 42
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: A β ₁₋₄₂
 peptide

03030446-052701
 <400> 10
 Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Gln Lys
 1 5 10 15
 Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys Gly Ala Ile Ile
 20 25 30
 Gly Leu Met Val Gly Gly Val Val Ile Ala
 35 40

<210> 11
 <211> 4
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Factor Xa
 restriction site

<400> 11
 Ile Glu Gly Arg
 1

<210> 12
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: intervening
 spacer region

<400> 12

Met His Gly Gly Ser Glu Phe Glu Asn His His His His His Asn
 1 5 10 15
 Asp Tyr Lys Asp Asp Asp Lys Asp Leu Ile Glu Gly Arg
 20 25 30

<210> 13

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Flag peptide

<400> 13

Tyr Lys Asp Asp Asp Lys
 1 5

090659446-344560
 <210> 14

<211> 40

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: A β ₁₋₄₀
 peptide

<400> 14

Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Gln Lys
 1 5 10 15
 Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys Gly Ala Ile Ile
 20 25 30
 Gly Leu Met Val Gly Gly Val Val
 35 40